



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,644	10/06/2003	Reinhard Pantke	028987.52517US	7822

23911 7590 01/12/2006
CROWELL & MORING LLP
INTELLECTUAL PROPERTY GROUP
P.O. BOX 14300
WASHINGTON, DC 20044-4300

EXAMINER

BARRETT, SUZANNE LALE DINO

ART UNIT PAPER NUMBER

3676

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/678,644	Applicant(s) PANTKE ET AL.	
	Examiner Suzanne Dino Barrett	Art Unit 3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,9,12,15-18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,9,12,15-18,20,21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3,5,9,12,15,18,20,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al '340 in view of Tanaka '539 and Nelsen et al '045. Miller et al teaches a one-piece molded flexible plastic drive shaft 34 comprising two driver ends 35,37/36,38 integrally molded thereon. Miller et al further teach that the flexible drive shaft may be used in various mechanical applications (col. 1, lines 19-20) and therefore would be capable of being utilized in a door lock arrangement. With respect to claim 5, Miller et al teach the suitability of various elasticities for different applications, such that an inelastic application would have been obvious to one of ordinary skill in the art as a matter of design choice. Miller et al further teach that the flexible drive shaft may be used in various mechanical applications (col. 1, lines 19-20), but fail to specify its use in a door lock arrangement. Miller et al fail to provide cross-sectional weakenings along the shaft in the form of depressions or grooves and in a helical line.

Tanaka teaches a one-piece molded flexible drive shaft for use in cylinder lock and latch arrangements (col. 2, lines 25-26, especially) comprising a shaft of unitary plastic molded construction and having a cross-sectional shape that is four-cornered,

Art Unit: 3676

round, hexagonal or any other desired shape (col. 2, lines 28-35). Tanaka further provides depressions or weakenings in the shaft in the form of grooves 22,24 formed in two different planes along the axial and circumferential directions. It would have been obvious to one of ordinary skill in the art to provide the drive shaft of Miller et al in a door lock arrangement as taught by Tanaka and further, with respect to claims 2,3, by providing a four-cornered or circular shape as taught by Tanaka to be an obvious matter of design choice.

Nelsen et al teach a flexible plastic drive shaft 36 comprising helical or radial grooves 46A-46C (see col. 5, lines 3-5) to increase flexibility of the shaft. It would have been obvious to modify the shaft of Miller et al, by utilizing it in a lock arrangement as taught by Tanaka, and further, by providing grooves of different formation, as taught by Tanaka with respect to claims 20,21 and as taught by Nelsen et al to increase the flexibility of the shaft as desired.

3. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al '340 in view of Tanaka '539 and Nelsen '045, as applied to claim 1 above, and further in view of Seagraves '255 or Symann '195. Both Seagraves and Symann teach plastic drive shafts comprising a breakthrough (between 21 and 22 in Fig. 2 of Seagraves; see Fig. 3 of Symann) along the shaft. It would have been obvious to modify the shaft of Miller et al to have such a breakthrough as taught by either Seagraves or Symann to enhance the flexibility of the shaft.

4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller et al in view of Tanaka and Nelsen '045 and Seagraves or Symann as applied to claim 16

above, and further in view of Bailey 5,531,599. Miller et al fails to teach a shaft having hollow sections. Bailey teaches the advantage of providing a flexible drive shaft 115 with hollow sections (col. 8, lines 9-10). It would have been obvious to modify the shaft of Miller, as taught by Tanaka, Nelsen and Seagraves or Symann and further, by providing a hollow section as taught by Bailey to provide enhanced flexibility.

Response to Arguments

5. Applicant's arguments with respect to claims 1-2,5,9,12,15-18,20,21 have been considered but are moot in view of the new ground(s) of rejection.

In view of Applicant's amendment, the claims are now rejected under 35 USC 103 in view of the previously applied prior art in combination as set forth above. Applicant's arguments that the Tanaka joint is inappropriate for use in a door lock system as discussed on page 7 is not understood, since Tanaka clearly contemplates such use in col. 1 and especially in col. 2, lines 25-26). It is noted that Tanaka is not used as a teaching of the specific cross-sectional weakenings, but rather a broad teaching of having such a drive shaft (incidentally including a weakness) for use on a door lock, and rather, it is the Nelsen patent which is used to teach the specific cross-sectional weaknesses. Furthermore, Applicant's argument on page 8, lines 1-2 and lines 13-14, that Miller fails to teach cross-sectional weakenings is moot, since the secondary references are used to teach such weakenings. It is further noted that all of the applied secondary references clearly teach the well known concept of providing

Art Unit: 3676

weakenings, grooves or depressions along a flexible rotary shaft. Accordingly, the claims stand rejected.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzanne Dino Barrett whose telephone number is 571-272-7053. The examiner can normally be reached on M-Th 8:30-7:00.

Art Unit: 3676

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Suzanne Dino Barrett
Primary Examiner
Art Unit 3676

sdb